

REMARKS

Claims 1–53 are pending and were rejected. Claims 24–26, 29, 31, 34, 38–40, 43, 47, and 52–53 were objected to. Claims 24–36, 38–49, and 52–53 are amended herein. No claims are cancelled. Claims 1–53 remain pending.

Claim Objections

Claims 24–26, 29, 31, 34, 38–40, 43, 47, and 52–53 were objected to, as appearing to depend from incorrect claims. Upon inspection, it appears that the dependencies for each of claims 24–36, 38–49, and 52–53 were incorrect. Each of these claims has been amended to correct this issue. Withdrawal of this objection is respectfully requested.

Oath/Declaration

The oath/declaration was objected to as defective. It appears from inspection of PAIR that the declaration was improperly identified when scanned. The undersigned discussed this issue via telephone with Examiner Brown on November 2, 2006 at approximately 10:00AM CST. Examiner Brown indicated that he had found the misidentified declaration and would withdraw the objection. Acknowledgement of this withdrawal is requested.

Rejections Under 35 U.S.C. § 103

Each of the pending claims was rejected under 35 U.S.C. § 103(a). The following remarks address only the independent claims, as each of these claims is believed to be patentable over the cited art, necessarily rendering the dependent claims patentable. Specifically, independent claim 1 was rejected as obvious over U.S. Patent 5,473,599 to Li et al. (“Li”) in view of Federal Information Processing Standards Publication 196 “Entity Authentication Using Public Key Cryptography” (referred to by Examiner as “Daley”). Independent claims 10, 23, 37, 50, and 51 were rejected as obvious over Li in view of Daley and in further view of “Applied Cryptography” by Schneier (“Schneier”).

One requirement of a *prima facie* obviousness rejection is that the proposed combination of references disclose every element of the rejected claims. However, the combination of references proposed fails to disclose one or more limitations of each of the pending claims. For example, claim 1 is drawn to a network switch that is capable of sending a secret fact to another

network switch and receiving back three things: (1) a second-type derivative of the secret fact, (2) pre-defined information about the second switch, and (3) a third-type derivative of the pre-defined information. The claimed switch includes a processor that compares the secret fact to the received second-type derivative and compares the received information to the third-type derivative of the information to authenticate the switch. The comparison is encompassed in the limitation drawn to the processor, which performs the comparison. Specifically, the claim requires:

a processor for (i) causing a comparison between said first secret fact and said second-type derivative of said first secret fact, and (ii) causing a comparison between said pre-defined information about said second switch and said third-type derivative of said pre-defined information about said second switch.

Examiner concedes that Li, which describes a system of network routers, does not disclose, teach, or suggest any sort of “strong authentication system,” which is Examiner’s characterization of the authentication described above. Examiner proposes Daley to supply these limitations. Because it is clear that Daley does not disclose, teach, or suggest the required authentication scheme, it is not necessary to address whether there are other elements of claim 1 that are not disclosed, taught, or suggested by Li. However, the right to do so at a later date is reserved.

For convenience and intelligibility, the following table compares certain limitations of claim 1 to the corresponding portions of Daley cited by Examiner as teaching these limitations.

Secret fact	R _B field in TokenBA ₁
Second-type derivative of said first secret fact	Signed R _B in TokenAB
Pre-defined information about said second switch	Certificate CertA
Third-type derivative of said pre-defined information	“Daley teaches that receiver B verifies the certificate or chain of certificates.”

A fundamental problem with Daley can be seen with regard to the last listed element, *i.e.*, the third-type derivative of said pre-defined information. Assuming, for the sake of argument, that the certificate CertA can be the pre-defined information about the second switch, there is still no “third-type derivative” of this information that is received by the receiving port and that can be compared by the processor. As clearly indicated in the table regarding the first two elements, and in the description on pp. 22–23 of Daley, the “derivatives” in this instance are the signed elements. However, there is no signed version of the certificate, nor is there any other derivative

of the certificate. The fact that receiver B separately verifies the received certificate is insufficient, because the claim requires a processor that compares the received pre-defined information to the received third-type derivative of the pre-defined information. Because the third-type derivative of the pre-defined information is absent from Li and/or Daley, the proposed combination fails to teach or suggest each element of claim 1. The rejection of claim 1 is therefore improper. Withdrawal of this rejection is therefore requested.

Independent claims 10, 23, 27, 50, and 51 were treated together by Examiner, and are therefore treated together in this response. Each of these claims, like claim 1, requires sending and/or receiving pre-defined information about a switch along with a third-type derivative of this pre-defined information. As with claim 1 above, Examiner relies on the Certificates as being this pre-defined information. However, as noted above, Daley does not teach or suggest that any derivative of the certificate is sent along with the certificate. Furthermore, the fact that Daley teaches separate verification of this certificate does not make up for this deficiency. The additional reference to Schneier does not supply this missing element. Therefore the rejections of claims 10, 23, 27, 50, and 51 are improper for substantially the same reasons outlined above. Withdrawal of these rejections is therefore requested.

No Suggestion or Motivation to Combine

Lack of suggestion or motivation to combine the references has also been argued. In response to these arguments Examiner has stated: "In this case, motivation is found in knowledge generally available to one of ordinary skill in the art." It is respectfully submitted that this is insufficient to support a *prima facie* obviousness rejection. While it is true that the motivation may come from the knowledge of persons of ordinary skill in the art, which suggests the need for "relying on objective evidence and making specific factual findings with respect to the motivation." See MPEP 2143.01(I) and cases cited therein. See also, e.g., *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (finding insufficient evidence in the absence of a finding "as to the specific understanding or principle within the knowledge of the skilled artisan"). The lack of suggestion or motivation to combine Li with Daley and/or Schneier further renders the rejection of claims 1-53 improper. Withdrawal of these rejections is therefore requested.

CONCLUSION

In view of the foregoing amendments and remarks, allowance of all pending claims is respectfully requested. If, after considering this reply, the Examiner believes that a telephone conference would be beneficial in advancing this case towards allowance, the Examiner is invited to contact the undersigned attorney at the number listed.

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Date

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